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Report to the Chairman, Joint
Committee on Printing, House of
Representatives

December 1991

DEFENSE MANAGEMENT

DOD's Estimated Savings for Printing Consolidation



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National Security and
International Affairs Division

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(1)

The Honorable Charlie Rose
Chairman, Joint Committee on Printing
House of Representatives

Dear Mr. Chairman:

As you requested, we have followed-up on certain matters discussed in our September 24, 1991, testimony¹ to the Joint Committee on Printing regarding the Department of Defense's (DOD) plans to consolidate the printing and duplicating functions of the Army, Air Force, Marine Corps, and the Defense Logistics Agency (DLA) under the Navy Publishing and Printing Service (NPPS). See appendix I for background information on DOD's plan to consolidate. At the time of our testimony, some data on DOD's consolidation plans and savings estimate had not been provided to us or was not available. Based on the data that was available, we stated that (1) the comparability of costs used to develop a savings estimate could not be validated, (2) some of the assumptions used to determine the savings estimate were questionable, and (3) specific plans or decisions as to how and where the savings would be achieved had not been made.

Since our testimony, DOD has delayed the consolidation and has provided us with additional data on its consolidation plans and savings estimate. You requested that we review this data to determine the validity of the savings estimate and the impact of certain assumptions on the savings estimate. After your request, the Conference Committee Report on the Defense Appropriations Act for fiscal year 1992 was issued. It takes the position that consolidating printing activities could lead to budget savings and stipulates certain requirements to ensure adherence to the principles established in Title 44 of the United States Code and Public Law 101-520, section 206 for procuring printing from commercial sources through the Government Printing Office (GPO).

Results in Brief

After reviewing the additional data submitted by DOD, we believe DOD's estimate still has many of the same problems we reported in our testimony. First, although DOD's \$28.8 million estimated annual savings have

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¹DOD's Plans to Consolidate Printing (GAO T NSIAD-91-54, Sept. 24, 1991).

been adjusted to reflect cost information based on NPPS actual experience, NPPS' overall cost comparison methodology has not been tested on any NPPS activities.

Second, the savings estimate is based on three assumptions that may not be valid. The estimate assumes that (1) higher cost activities included in the consolidation can and will be reduced to the NPPS cost; (2) annual demand for in-house printing will not significantly change; and (3) commercial printing requirements, printing contracted out to the private sector through GPO, will be under NPPS centralized management.

NPPS officials stated that they intend to reduce the services' and DLA's costs to the NPPS costs by using their professional printing organization and management techniques. NPPS' November 8, 1991, preliminary plan to achieve such reductions in the services' and DLA's printing and duplicating costs identifies equipment, personnel, and plant changes that might be made after the consolidation. The plan, however, does not identify how much of the savings are expected to come from (1) personnel cost reductions, (2) materials cost reductions, or (3) facilities cost reductions. NPPS officials stated that the bulk of the savings will come from personnel reductions and changes. They also said that a far greater number of personnel will have to be reduced than the 284 initially planned for this initiative.

The assumption that in-house printing demand will remain stable does not reflect possible decreases resulting from force structure reductions, industrial funding, or increased commercial printing procurements. Any reductions in in-house printing demand will reduce the savings estimate and either increase printing costs or require further personnel reductions.

In addition, the assumption that commercial printing will also be brought under NPPS centralized management remains in question. The Senate Appropriations Committee Report on the Defense Appropriations Act for fiscal year 1992 directed that the services deal directly with GPO for commercial printing services. NPPS officials, however, stated that without commercial printing their savings estimate is not valid. The Conference Committee Report on Defense Appropriations supported the Senate Committee's direction and has given DOD additional directions providing for congressional oversight of the printing consolidation. These directions include submitting to the Appropriations Committee

and the Joint Committee on Printing all supporting documentation verifying estimated savings associated with the consolidation and an implementation plan identifying plants to be closed and expected personnel changes.

Depending on the accuracy of the cost comparisons methodology and the validity of the assumptions used, the actual savings may be higher or lower than estimated.

Savings Estimate Adjustments and Untested Cost Comparison Methodology

To determine the savings associated with the consolidation, NPPS compared (1) total fiscal year 1990 production cost for each Army, Air Force, Marine Corps, and DLA printing and duplicating facility to be consolidated under its management and (2) a NPPS calculated cost based on its pricing factors and each activity's production.

During our September 24, 1991, testimony before the Joint Committee on Printing, we could not conclusively state that the costs collected for the services and DLA were comparable to those costs included in the NPPS costs used in their comparison until we had obtained the study's supporting data. After the hearing, NPPS provided additional data that resolved some of our concerns, but also raised questions about the factors and percentages used in the study to determine the cost of the other services' and DLA's personnel support, personnel benefits, cost of space, and equipment depreciation. After discussions with NPPS officials, these cost factors were revised by NPPS to more closely reflect its experience within these elements. These changes reduced the NPPS savings estimate by about \$4.6 million.

NPPS also made changes that reduced the NPPS costs used in the comparison. Such reductions increased the savings estimate. Specifically, NPPS officials used their actual 1992 standard prices to determine the NPPS costs for the other services' and DLA's production—the initial estimate was based on estimated 1992 prices.² Using the NPPS actual prices decreased the NPPS costs for the other services' and DLA's production by \$11.4 million. NPPS officials also discussed additional adjustments to their savings estimate that they believed would increase their savings estimate; however, they could not determine the impact of the changes. See appendix II for a discussion of the NPPS methodology and revisions to the NPPS estimate.

²NPPS used "expected 1992 prices" since, at the time of its study, the fiscal year 1992 prices had not been published.

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Although the savings estimate has been adjusted to reflect cost calculations that are based on NPPS experience, the overall methodology of comparing NPPS determined costs—which were based on NPPS average prices and other factors—to the individual activity's costs has not been tested on any NPPS activities. Some service and DLA officials have expressed concern that the use of averages to determine NPPS comparable costs for their production was not representative of the everyday jobs they have in their printing plants, nor does the NPPS comparable costs represent the NPPS prices that will be charged to the services and DLA. Still other officials stated that had NPPS applied the same overall methodology to NPPS' own activities it would also have shown savings.

Savings Assumptions Questionable

The NPPS savings estimate is based on the assumptions that (1) the higher cost of the services' and DLA's printing activities can and would be reduced to the NPPS cost, (2) the annual demand for in-house printing will not significantly change, and (3) all commercial printing requirements will be under NPPS centralized management. The validity of these assumptions is questionable and if not realized could have an impact on the estimated savings.

NPPS Plans for Reducing Cost

The NPPS savings estimate is based on the assumption that, under NPPS centralized management, the printing costs at the Army, Air Force, Marine Corps, and DLA activities can and will be reduced to the NPPS estimated cost. The NPPS cost comparison showed that of the 207 Army, Air Force, Marine Corps, and DLA printing activities to be brought under NPPS management, 166 had actual costs higher than the NPPS costs. The remaining 41 activities had lower costs.

NPPS officials stated that they expect to achieve cost reductions from centralized management, the establishment of productivity standards, equipment modernization, and streamlined processes and procedures. They stated that these efficiencies will enable them to eliminate 284 positions from the 2,014 Army, Air Force, Marine Corps, and DLA printing work force expected to be transferred to NPPS. They further stated that the savings estimate is not based on a physical consolidation of facilities.

According to our September 24, 1991, testimony, NPPS had not developed a specific plan on how it would achieve the estimated savings or cost reductions. At that time, NPPS officials stated that decisions on what plants, equipment, or personnel would be cut back, reduced, replaced or

eliminated would not be determined until after the October 1, 1991, scheduled transfer of the activities to NPPS.

NPPS officials have since prepared a preliminary plan³ that shows, by activity, equipment, personnel, and plant changes that might be taken to achieve their savings. The plan covers 169 of the total 207 activities included in the consolidation. The proposals mostly involve replacing older equipment with new, more efficient equipment, eliminating personnel, and downsizing activities. The plan also contains some personnel reductions resulting from transfers of work to other nearby activities.

The plan, however, does not quantify the dollar savings expected from the proposals or identify all the actions needed to achieve the full savings. The plan does not identify how much of the savings are expected to come from (1) personnel cost reductions, (2) material costs reductions, or (3) facilities cost reductions. However, NPPS officials acknowledged that the bulk of the savings will have to come from personnel reductions. The preliminary plan identifies approximately 370 billets for reduction. This equates to approximately \$12 million using \$34,000⁴ for the average annual pay and benefits of an employee. This suggests that a far greater number of positions will have to be reduced to achieve the \$28.8 million or more in savings. Additionally, several activities were identified for consolidation or closing in the preliminary plan. Costs and savings associated with the proposed closing or merging of facilities were not identified in the plan. NPPS officials stated that they will not be able to develop a precise plan until 6 months after the consolidation has been implemented.

Changes in In-House Printing Demand May Change the Savings Estimate

There are several factors that could significantly reduce printing demand. Since the savings are based on the same units being produced at lower costs, any reduction in demand would reduce the savings estimate. First, the NPPS savings estimate does not reflect the anticipated impact of DOD's planned 25-percent reduction in defense spending or the impact of the Defense Base Closure and Realignment Act of 1990 (P.L. 101-510). NPPS officials told us that they did not know the impact of these changes. They stated that, naturally, printing plants would close if

³This plan, called the DMRD-998 Equipment, Personnel, Plant Preliminary Observations, is based on observations made during the validation study. NPPS officials state that these actions are subject to change when hands-on experience is gained at the production location.

⁴This amount comes from NPPS' Civilian Personnel Resource Reporting System report

bases were shut down; however, they did not know if a 25-percent reduction would mean an equivalent reduction in printing.

Regarding base closures, some of the 207 printing plants may be effected. Specifically, six plants associated with the July 1, 1991, closure list represent about \$800,000 of the NPPS preliminary savings estimate. Officials from the Office of the Secretary of Defense (OSD) Comptroller's Office told us that they are preparing a base closure package that will address the impact of the closures on this and other DOD initiatives. At the time of our review, the package was being circulated through the services for comment.

Additionally, industrial funding may reduce printing demand. One of the expected benefits of establishing industrially funded operations is that marginal or unnecessary requirements will be reduced because the user/customer is billed for the services provided. While this reduction in unnecessary requirements would reduce the cost of government printing overall, the reduction in demand also would reduce the NPPS savings estimate associated with in-house printing.

Increasing contracting out, commercial printing procurement, could also significantly reduce NPPS' in-house printing demand. The Joint Committee on Printing has directed that commercial procurement be maximized and that in-house printing by federal departments be reduced where possible. Our limited examination of average in-house production run lengths for each of the services, including NPPS, indicated that contracting out is not being maximized. Within NPPS, we found several examples of printing jobs that could have been contracted out but were performed in-house. NPPS officials stated that longer run printing jobs may be done in house to maintain efficient production levels when normal in house printing demand temporarily falls below capacity.

Savings Estimate Contingent on Commercial Printing

The NPPS savings estimate is based on the consolidation of in-house printing activities. However, the consolidation plan assumes commercial printing procurement, both field and departmental printing procurement,⁵ will also be placed under NPPS. NPPS and service officials stated that there are no savings associated with consolidating commercial printing procurement under NPPS. NPPS officials, however, stated that the

⁵Departmental printing procurements are servicewide bulk procurements using the GPO's central operations, while field or regional procurements are categorized as procured printing for command or local use.

consolidation must include NPPS management and control over commercial printing requirements to achieve the savings associated with in-house printing. They further stated that management control over both in-house and commercial printing is necessary to effectively manage the in-house work load and to reduce down time. A September 10, 1991, decision memorandum, signed by the Deputy Secretary of Defense, states that if commercial printing is not a part of the consolidation, "customers would retain the capability to satisfy their printing requirements through procurement contracts, thereby circumventing the consolidated system." However, the Senate Appropriations Committee report on Defense Appropriations for fiscal year 1992 directed that commercial procurements be sent directly from the service initiating the job to GPO. The Conference Committee Report on Defense Appropriations supported the Senate direction and added further requirements.

Under the NPPS management proposal, each printing activity would go through NPPS to procure commercial printing, rather than procuring directly through GPO. NPPS would decide whether to print the order in house or through GPO. To cover the administrative cost, NPPS would add a surcharge to all orders going through NPPS to GPO for commercial printing.

In our September 24, 1991, testimony, we stated that some service and DLA officials believed that the requirement to go through NPPS for commercial printing rather than going directly to GPO, unnecessarily increased the time and expense of commercial procurements. Regarding expense, NPPS had initially estimated that its surcharge for commercial printing, both departmental and field, would be 5.5 percent of the commercial printing cost. In the September 10, 1991, decision memorandum, NPPS offered to reduce the surcharge for departmental printing to no more than those costs associated with pay and benefits for these printing procurement personnel—approximately 3 percent. NPPS officials have since told us that they plan to charge the services and DLA the actual cost for procurement personnel salaries and benefits for departmental procurements. These officials expect this charge to be less than 3 percent. The NPPS validation study identified about \$85.5 million for the services' and DLA's departmental printing. The NPPS study, however, did not identify the personnel and salaries associated with departmental printing.

NPPS still plans to levy a 5.5 percent surcharge on field or regional printing procurements. This surcharge, according to NPPS officials, will cover the salaries and benefits for personnel associated with field

printing procurement and an amount, approximately 2.5 percent of the surcharge, for overhead at the NPPS headquarters management office. NPPS' validation study identified \$59.1 million in field printing that was procured from GPO or other sources in fiscal year 1990. Accordingly, NPPS will add \$3.3 million to this printing—approximately \$1.8 million of this amount will pay the salaries and benefits of personnel associated with this printing and \$1.5 million will be for NPPS overhead. The revenue from the surcharges were not a part of the costs used in computing the savings estimate. A NPPS official, however, told us that the amount associated with NPPS headquarters overhead, the 2.5 percent portion of the surcharge, probably should be included as a cost used in computing the savings estimate since it represents an additional charge to the services and DLA.

The Senate Appropriations Committee's Report on Defense Appropriations for fiscal year 1992 stated that the DOD's consolidation of printing will be done in a way that maximizes savings and directed DOD to "send printing and duplicating jobs that will not be done in in-house facilities directly from the service initiating the job to the GPO." The report further stated that "this will reduce administrative lead time and costs associated with procuring printing services from commercial vendors."

The Conference Committee Report for Defense Appropriations supported the Senate Appropriations Committee's above direction and further directed DOD to "submit to the Committees on Appropriations of the House and Senate and the Joint Committee on Printing the following:

- An implementation plan identifying plants to be closed, maximum production capacities, equipment purchases, transfers and disposals, and expected personnel changes.
- All supporting documentation verifying estimated savings associated with the implementation plan."

The report further stated that "no appropriated funds should be expended to implement any consolidation of printing services until the detailed implementation plan and supporting documentation described above are submitted to the Appropriations Committees and approved by the Joint Committee on Printing."

Recommendations

Because of the Senate Appropriations Committee's and Conference Committee's directions to DOD providing for congressional oversight of this

printing consolidation, we are not making any recommendations at this time.

Scope and Methodology

We interviewed officials from GPO, OSD, DLA, the Army, Navy, Air Force, and Marine Corps about the proposed consolidation. In addition, we reviewed DOD's September 10, 1991, decision memorandum and the attached June 24, 1991, NPPS preliminary report Consolidation of DOD Printing; DOD's General Implementation Plan on the Consolidation; NPPS' Defense Management Report Decision 998 Equipment/Personnel/Plant Preliminary Observations; Air Force's draft and DLA's final Memoranda of Agreement; Title 44 of the United States Code; the Government Printing and Binding Regulations; and other related GAO, DOD, and service reports.

To assess the cost comparisons used to determine the savings estimate, we (1) reviewed NPPS accounting records and cost data, (2) discussed NPPS rationale for including certain cost elements in its study and obtained its experience for items that were questionable, and (3) compared, for a limited number of activities, the information collected for the other services and DLA with the data in NPPS reports, as well as subsequent changes that were made by NPPS. In addition, we obtained NPPS data on how it determined the NPPS comparable costs for the services' and DLA's production and verified such data to NPPS reports for the same activities previously mentioned. We also interviewed officials in the Office of Personnel Management and General Service Administration on certain issues within their purview.

We performed our review between October 1991 and November 1991 in accordance with generally accepted government auditing standards.

As requested, we did not obtain written agency comments on this report. However, we did discuss a draft of this report with DOD officials and have incorporated their comments where appropriate.

We are providing copies of this report to the Chairman of the Joint Committee on Printing, the Secretaries of Defense, Army, Navy, and Air Force, and the Director of DLA, as well as to other interested parties upon request.

Please contact me at (202) 275-4587 if you or your staff have any questions concerning this report. Other major contributors to this report are listed in appendix III.

Sincerely yours,



Paul F. Math
Director, Research, Development, Acquisition,
and Procurement Issues

Contents

Letter	1
Appendix I	14
Department of Defense's Consolidated Printing and Duplicating Plan	
Appendix II	16
Changes to Cost Comparison	
Changes to the Services' and DLA's Cost	17
Changes to NPPS Determined Costs and Other Adjustments	19
NPPS Use of Actual 1992 Prices	20
Appendix III	22
Major Contributors to This Report	
Tables	
Table II.1. The Services' and DLA's Revised Cost Factors and Related Changes	17
Table II.2: Savings Estimate Changes Due to Use of Actual 1992 Prices and Other Adjustments, If Determinable	20

Abbreviations

DOD	Department of Defense
DLA	Defense Logistics Agency
GAO	General Accounting Office
GPO	Government Printing Office
NPPS	Navy Publishing and Printing Service
OSD	Office of the Secretary of Defense

The Department of Defense's Consolidated Printing and Duplicating Plan

On November 16, 1990, the Deputy Secretary of Defense approved a Defense Management Report Decision that called for the consolidation¹ of all Department of Defense (DOD) printing and duplicating services under the Navy's industrially funded, centrally managed Navy Publishing and Printing Service (NPPS) effective October 1, 1991. According to the DOD's Comptroller's Office, the consolidation of printing would save about \$25 million to \$30 million annually. Savings were estimated to begin by the middle of fiscal year 1993 at which time the savings goals were estimated at \$13.7 million and about \$30 million annually beginning in 1994. DOD has reflected these savings goals in budget documents covering fiscal years 1992-1997.

Officials from the Office of the Secretary of Defense (OSD), the military services, and the Defense Logistics Agency (DLA), however, stated that the methodology used by DOD in preparing the savings estimate was questionable. OSD and Navy officials stated that certain costs associated with the printing function, such as overhead, reprographics, and micrographics, were not included in the savings analysis. In addition, service and DLA officials told us that the analysis did not address all activities equally.

On February 15, 1991, the OSD Director of Administration and Management tasked NPPS to lead a joint service and DLA team to conduct an implementation study. Specifically, NPPS was to (1) examine and validate the cost savings associated with the consolidation, (2) determine the number of people to be affected by the consolidation, and (3) identify the organizations and functions to be included in the new structure. The decision, however, to consolidate under NPPS was not to be revisited.

On August 1, 1991, we reported² on DOD's plans to consolidate printing. At that time, DOD had not completed its implementation study and would not provide us with preliminary study reports and supporting documentation until final decisions and concurrences within DOD had been obtained. Preliminary information that we did obtain raised questions regarding the assumptions used to develop the savings estimate, plans to implement the consolidation, and the possible impact of those plans on commercial printing.

¹According to NPPS officials, this consolidation is a consolidation of management—not a physical consolidation of plants/activities.

²Defense Management: DOD's Plans to Consolidate Printing (GAO/NSIAD-91-268, Aug. 1, 1991).

Appendix I
The Department of Defense's Consolidated
Printing and Duplicating Plan

On September 10, 1991, DOD issued its report Preliminary Report on Consolidation of DOD Printing. Accompanying the report was a decision memorandum that (1) approved the report's agreed upon recommendations, (2) provided resolutions to issues that were not resolved in the report, and (3) presented DOD's official savings estimate for the consolidation of printing. The report estimated that a net annual savings of about \$41 million could be saved if 338 Army, Air Force, Marine Corps, and DLA printing and duplicating activities were placed under NPPS.

However, the decision memorandum excluded certain tactical field operations, national guard and reserve facilities, and intelligence locations from the consolidation. These exclusions reduced the projected annual net savings to \$28.8 million for the 207 activities that remained. Under the proposed consolidation, 207 Army, Air Force, DLA, and Marine Corps facilities will be added to NPPS current 59 major printing facilities and 101 smaller reprographics facilities. In addition, NPPS' 1991 civilian strength of about 1,700 will increase with 1,847 civilian and 167 military billets from the acquired activities.

Changes to Cost Comparison

To determine the savings associated with the consolidation, NPPS first collected fiscal year 1990 cost and production data for the services' and DLA's printing and duplicating facilities that would be consolidated in the new structure. This information included (1) actual fiscal year 1990 costs for civilian salaries, equipment maintenance and repair, and equipment lease/rental and (2) certain factors and percentages that were agreed to by the services and DLA to determine costs for civilian benefits, military personnel, personnel support, space, supply, depreciation, and miscellaneous overhead.

NPPS determined a NPPS comparable cost for the other services' and DLA's production by (1) computing a NPPS average price per thousand units of production for the other services' and DLA's production based on its expected 1992 prices¹ and (2) multiplying each activity's total production units for fiscal year 1990 by these average prices per thousand units of production to get NPPS' cost for the other services and DLA's 1990 production. NPPS then subtracted the difference between each activity's fiscal year 1990 costs and NPPS estimated cost for comparable production to determine the savings associated with the consolidation.

Our September 24, 1991, testimony before the Joint Committee on Printing questioned the comparability and validity of costs elements used in developing the savings estimate. We could not conclusively state that costs within NPPS reflected the same costs that were collected for the services and DLA until we obtained the study's supporting data. NPPS has subsequently provided additional data that has resolved some of our concerns, but raised questions regarding the factors and percentages used in determining the various cost for the services and DLA.

NPPS officials told us that certain cost elements, such as personnel support, and cost of space were not specifically quantifiable by the other services and DLA. As a result, these elements were projected using factors and percentages that were agreed to by the service representatives before the NPPS study began. We questioned the factors and percentages used to determine the other services' and DLA's personnel support, personnel benefits, cost of space, and depreciation. We asked NPPS to provide us with their experience regarding these elements and found that the factors and percentages used to determine the services' and DLA's costs were not comparable to NPPS experience—some were higher some

¹NPPS used "expected 1992 prices" since, at the time of its study, the fiscal year 1992 prices had not been published. To do this, they simply increased NPPS determined average price per thousand which were computed using its 1991 standard prices--by 15 percent, the amount they anticipated its 1991 prices would rise.

were lower. After discussions with NPPS officials, these cost factors were revised by NPPS to more closely reflect actual NPPS experience within these elements.

NPPS also revised the estimated 1992 average prices used in determining the savings estimate to reflect actual 1992 standard prices, released October 1, 1991. NPPS officials also made a revision to reflect a downward \$2 million adjustment for a change they could not explain. In addition, NPPS officials discussed adjustments to the savings estimate to negate the effects of a one-time 10-percent price increase for new equipment that was included in NPPS 1992 prices and an adjustment to escalate the services' and DLA's 1990 costs to 1992 costs. The latter adjustments were not readily determinable. The following are discussions on those revisions, along with those previously mentioned.

Changes to the Services' and DLA's Cost

Table II.1 shows each of the revised factors associated with the services' and DLA's costs and the effect such changes had on the savings estimate, if determinable.

Table II.1: The Services' and DLA's Revised Cost Factors and Related Changes

Cost element change	Dollars in millions	Nature of change	Savings
Facilities		Reduced cost per square foot of space from \$10 to \$5.88	(\$5.7)
Personnel support		Reduced personnel support cost from 10% to 5.6%	(2.1)
Depreciation		Increased from 1% per month to 1.164%	0.0
Personnel benefits		Increased from 11% of payroll cost to 18%	3.6
Miscellaneous overhead		10% of total changes to cost elements in NPPS study	(0.4)
Total cost element changes			(\$4.6)

Facilities—Cost of Space

NPPS applied a cost factor of \$10 per square foot in determining the Army's, Air Force's, DLA's, and Marine Corps' cost of space, utilities, and repair and maintenance. NPPS officials stated that this figure was used in previous OSD consolidation studies and was not based on each activity's actual costs of space. NPPS determined that its actual cost of space was

about \$5.88 per square foot. This covers utilities, rental building space,² plant facilities repair and maintenance, and the cost of building alterations. NPPS subsequently reduced the consolidated activities' cost of space to \$5.88 per square foot. This revision lowered the costs for the services' and DLA's activities and reduced the total savings estimate by \$5.1 million. As a result, reduction in savings for facilities was \$5.1 million plus the \$600,000 reduction associated with Air Force and Marine Corps exception to the General Service Administration Standard Level User Charge—for a total reduction of \$5.7 million.

Personnel Support

To estimate personnel support cost, NPPS added 10 percent to the cost of civilian salaries and benefits for each service and DLA activity. This 10-percent factor was also used in prior OSD consolidation studies. It covers personnel servicing, accounting, payroll, data processing, security, and other support.

As reported in our August 1, 1991, report, NPPS does not pay personnel support costs to a personnel office and therefore these costs were not reflected in its prices. However, NPPS officials stated that they do incur some costs associated with personnel support that fall into the other categories. These include the costs associated with their Equal Employment Opportunity officers, accounting staff, payroll, security, and administrative support. NPPS officials identified about \$3.2 million in such costs that were associated with their four regional offices. Using this figure, NPPS subsequently revised the personnel support factor in the validation study downward to 5.6 percent. This lowered the services' and DLA's activities validated costs and reduced the total savings estimate by \$2.1 million.

Equipment Depreciation

During the September 24, 1991, hearing, we testified that we could not conclusively determine whether NPPS had included depreciation in its expected 1992 prices. NPPS subsequently provided additional data for us to show that depreciation was included in its study's expected 1992 prices. However, NPPS computed its equipment depreciation at a rate 1.164 percent per month. This resulted in a depreciable life of 7.158 years. This equipment depreciation rate was faster than the 1-percent per month rate applied to the services' and DLA's activities. NPPS officials

²This amount, according to a NPPS official, is the General Service Administration Standard Level User Charge. Air Force and Marine Corps plants were all on military installations and do not pay this charge, so NPPS adjusted the amount charged for their space by a total of \$600,000. No adjustment was made for DLA's activities that were also on military installations.

agreed that the 1-percent depreciation rate should be revised to make it comparable to NPPS. These officials, however, could not determine the effect of such a change on the savings estimate.

Civilian Benefits

To estimate civilian benefit costs, NPPS added 11 percent to the cost of civilian salaries for each Army, Air Force, Marine Corps, and DLA activity. Based on information from its Civilian Personnel Resource Reporting System report, NPPS determined its actual rate for civilian benefits to be 18.4 percent. NPPS has revised the 11-percent figure to reflect actual NPPS cost. This raised the cost of the Army's, Air Force's, Marine Corps', and DLA's activities and increased the total savings estimate by \$3.6 million.

Miscellaneous Overhead

NPPS estimated miscellaneous overhead as 10 percent of the subtotal of the services' and DLA's printing and duplicating costs. This amount covered such overhead items as delivery, vehicle rental, janitorial services, training tuition, performance awards, travel, computer services, financial, and administrative services. NPPS database made an adjustment to miscellaneous overhead since the validated activity costs decreased with the changes to facilities, personnel support, depreciation, and personnel benefits—an overall net decrease of about \$4.2 million. The savings estimate was, therefore, decreased by \$420,000 to reflect 10 percent of the \$4.2 million reduction.

Changes to NPPS Determined Costs and Other Adjustments

Table II.2. shows each of the changes associated with the NPPS comparable cost for the services' and DLA's production and the effect such revisions and other adjustments had on the savings estimate, if determinable.

Table II.2: Savings Estimate Changes Due to Use of Actual 1992 Prices and Other Adjustments, If Determinable.

Dollars in millions		
Cost element	Nature of change	Savings change
NPPS 1992	Reduced based on use of actual NPPS 1992 prices	\$11.4
Unidentified amount ^a		(2.0)
NPPS 1992 equipment	Reduced equipment purchase cost beyond 1993	
Escalate 1990 costs	Escalated activities cost to 1992	

^aNPPS made \$2 million in downward adjustments to its original \$28.8 million savings estimate, but did not retain a copy of the data file showing where the adjustments were made.

^bEffect on savings estimate has not been determinable.

NPPS Use of Actual 1992 Prices

The NPPS average price per thousand units of production, which was used to determine NPPS' price for the services' and DLA's production, was based on fiscal year 1991 pricing data and escalated 14.9 percent to reflect price increases estimated for fiscal year 1992. NPPS has since determined that its actual 1992 prices will average less than the 14.9 percent. NPPS officials stated that the NPPS cost determined for the services and DLA was lower because all of the prices did not rise by 14.9 percent. For example, electrostatic work only increased 3 percent in 1992. The change from expected NPPS 1992 prices to its actual prices decreased the NPPS determined cost for the services and DLA's production and therefore increased the savings estimate by \$11.4 million.

Other Adjustments

As previously mentioned, the NPPS determined cost was based on its fiscal year 1991 prices charged to customers, escalated to reflect anticipated price increases for fiscal year 1992. According to NPPS officials, the fiscal year 1992 price increase was 4.9 percent plus an additional one year increase of 10 percent to finance the cost of new equipment needed for the consolidation. NPPS officials stated that this 10-percent increase would not be reflected in NPPS costs after fiscal year 1992. The officials also stated that this increase should not be fully reflected as a NPPS cost in determining savings for fiscal year 1993 and beyond. However, since NPPS sets its prices to breakeven, these officials did not know for certain if the 10-percent decrease in prices would be reflected in NPPS' prices across the board and therefore they were unable to determine the impact on the savings estimate.

Appendix II
Changes to Cost Comparison

According to NPPS officials, the savings estimate was based on a comparison of NPPS fiscal year 1992 average costs to the services' and DLA's fiscal year 1990 costs. They also stated that escalating the services' and DLA's costs to fiscal year 1992 dollars, by approximately 3 percent in 1990 and 4 percent in 1991, would also increase the savings estimate. However, due to other factors such as a net operating loss in NPPS in 1991, they were unable to determine the impact on their savings figure.

Major Contributors to This Report

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